

REMARKS

Initially, in the Office Action dated December 31, 2003, the Examiner rejects claims 19, 20, 25, 26, 31 and 32 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,278,528 (Turunen). Claims 21-24, 27-30 and 33 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Turunen in view of U.S. Patent No. 6,031,494 (Okabe et al.). Claims 19-36 have been rejected under the judicially-created doctrine of obviousness-type double patenting.

By the present response, Applicants have canceled claims 20, 23, 24, 26, 29, 30, 32, 35 and 36 without disclaimer. Claims 19, 25 and 31 have been amended to further clarify the invention. Applicants have submitted new claims 37 and 38 for consideration by the Examiner and assert that these claims do not contain any prohibited new matter. Claims 19, 21, 22, 25, 27, 28, 31, 33, 34, 37 and 38 remain pending in the present application.

35 U.S.C. §102 Rejections

Claims 19, 20, 25, 26, 31 and 32 have been rejected under 35 U.S.C. §102(b) as being anticipated by Turunen. Claims 20, 26 and 32 have been cancelled therefore rendering these rejections moot. Applicants respectfully traverse these rejections as to the remaining pending claims.

Turunen discloses an inexpensive and lightweight air insulated high frequency filter that can be made utilizing a radio device's frame and printed circuit board intended for electrical circuits, so that during manufacture of the printed board it is machined so that several side by side finger-like projecting tongues are formed,

which are entirely coated with electrical conducting material. Thereafter, the printed circuit board, on which electrical and mechanical components intended for it are mounted, is placed in the radio device's crate-like frame made of conducting material and possibly provided with partition walls, and on which also cover parts are fastened so that the tongues will be parallel with them and located between them, whereby the tongues, the enclosing cover parts and the frame wall parts form a filter structure.

Regarding claims 19, 25 and 31, Applicants submit that Turunen does not disclose or suggest the limitations in the combination of each of these claims of, inter alia, at least part of a wall of a plurality of walls of a box having a periodic structure formed on an interior wall of the box to filter undesired signal wave propagations through the interior of the box, or at least a part of the wall of the plurality of walls of the box having a periodic structure formed on an interior of the wall of the plurality of walls of the box and a plurality of protrusions to prevent undesired signal wave propagation of high frequency waves through the interior of the box of the high frequency receiving device, or at least a part of the wall of the plurality of walls of the box having a periodic structure formed on an interior of the wall of the plurality of walls of the box in a periodic pattern of materials or mechanical configurations to provide a filtering function to prevent undesired signal wave propagation of high frequency waves through the interior of the box of the high frequency transmitting device. The Examiner summarily asserts that all limitations in these claims of the present application are disclosed in Turunen in Fig. 4 with reference characters 14

and 15. However, these portions of Turunen do not disclose or suggest a box or a box with a wall at all. Reference character 15 is a printed board. This is not a box. Further, reference character 14 is a filter made in the middle of the printed board. Printed board 15 is placed in a radio telephone housing (see Turunen, col. 2, lines 54-56, and col. 3, lines 50-61). Printed board 15 disclosed in Turunen is used to mount RF circuit elements. This is not at least a part of a wall of a plurality of walls of a box that has a periodic structure formed on an interior wall of the box or that has a plurality of protrusions, as recited in the claims of the present application. Turunen does not disclose or suggest a box or a box with a periodic structure as recited in the claims of the present application.

Accordingly, Applicants submit that Turunen does not disclose or suggest the limitations in the combination of each of claims 19, 25 and 31 of the present application. Applicants respectfully request that these rejections be withdrawn and that these claims be allowed.

35 U.S.C. §103 Rejections

Claims 21-24, 27-30, 33 and 34 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Turunen in view Okabe et al. Claims 23, 24, 29 and 30 have been cancelled therefore rendering these rejections moot. Applicants respectfully traverse these rejections as to the remaining pending claims.

Okabe et al. discloses an improved, compact, lightweight handy-phone provided with a built-in directional planar antenna. The planar antenna is mounted on a portion of a high-frequency printed wiring board, and a shielding case covers

the high-frequency printed wiring board with a surface of the portion exposed. A maximum linear size of the shielding case and the direction of main polarization of the planar antenna is nearly equal to half the wavelength of an electromagnetic wave to be radiated by the planar antenna.

Regarding claims 21, 22, 27, 28, 33 and 34. Applicants submit that these claims are dependent on one of independent claims 19, 25 and 31 and, therefore, are patentable at least for the same reasons noted regarding these independent claims. Applicants submit that Okabe et al. does not overcome the substantial defects noted previously regarding Turunen. For example, Applicants submit that none of the cited references disclose or suggest an antenna in the interior of the box where an orifice to pass radio waves is provided on a wall of the plurality of walls in the box in the vicinity of the antenna.

Accordingly, Applicants submit that neither Turunen nor Okabe et al., taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of each of claims 21, 22, 27, 28, 33 and 34 of the present application. Applicants respectfully request that these rejections be withdrawn and that these claims be allowed.

Obviousness-Type Double-Patenting Rejection

Claims 19-36 have been rejected under the judicially-created doctrine of obviousness-type double patenting. Applicants have submitted a Terminal Disclaimer concurrently with this response therefore overcoming these rejections.

New Claims

Applicants have submitted new claims 37 and 38 for consideration by the Examiner and respectfully submit that these claims do not contain any prohibited new matter and are patentable over the cited references. For example, Applicants submit that none of the cited references, taken alone or in any proper combination, disclose suggest or render obvious a box formed from a metallic base plate, side walls and a metallic lid separated from the base plate by the side walls, or semiconductors mounted on a surface of the metallic base plate, which forms high frequency circuit including first amplifier inputting signals received from an antenna, a first mixer mixing an output signal of the first amplifier with an output signal from an output signal from a high frequency signal source, a second mixer mixing an input signal to be transmitted with an output signal from the high frequency signal source, and a second amplifier inputting an output signal of the second mixer and outputting to the antenna where at least a part of the ceiling part of the lid facing the inside of the box has a periodic structure to prevent propagation of undesired signal between the high frequency signal source, input side of the first amplifier and output side of the second amplifier. As noted previously, Turunen does not disclose or suggest a box having a periodic structure. Turunen merely discloses a printed board with finger-like projecting tongues that may be mounted into a radio device's crate-like frame.

Accordingly, Applicants submit that neither Turunen nor Okabe et al., taken alone or in any proper combination, disclose, suggest or render obvious the

limitations in the combination of each of new claims 37 and 38 of the present application. Applicants respectfully request that these new claims be entered and allowed.

In view of the foregoing amendments and remarks, Applicants submit that claims 19, 21, 22, 25, 27, 28, 31, 33, 34, 37 and 38 are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (referencing attorney docket no. 520.38501CX1).

Respectfully submitted,

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